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Joint PhD VUB & U LISBOA  
2017-2018

INVITATION to the Public defence of

**Samuel dos SANTOS RIBEIRO**

To obtain the academic degree of

**'Doctor of Philosophy in Medical Sciences'**

**'Doctor of Philosophy in Medicine, speciality of Gynaecology and Obstetrics'**

**Rethinking the approach to endometrial non-receptivity:  
treating the cause instead of the consequence.**

**Wednesday 13 December 2017**

Auditorium **Vanden Driessche**, 17:00

Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

How to reach the campus Jette:

<http://www.vub.ac.be/english/infoabout/campuses>

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## Summary of the dissertation

Approximately 9% of all couples suffer from infertility. Up to 30% of these patients will eventually require in-vitro fertilization, a technique that has a disappointingly low live birth rate of approximately 30% per cycle. Many authors have postulated that the supraphysiologic milieu of hormones produced during ovarian stimulation, namely progesterone, may affect endometrial receptivity and hinder both embryo implantation and neonatal outcomes. This has led many centres to change their clinical practice by measuring serum progesterone levels during ovarian stimulation and adopting a freeze-all strategy when a certain threshold of progesterone is exceeded. Meanwhile, others have proposed additional measures to enhance endometrial receptivity in in-vitro fertilization overall, among which endometrial scratching has become an increasingly widespread, although largely misunderstood, alternative.

The general aim of this doctoral thesis was to improve our understanding on how controlled ovarian stimulation affects endometrial receptivity and to what extent one can change clinical practice to enhance pregnancy outcomes. To this effect, we formulated specific objectives aimed to tackle the potential mechanisms behind stimulation-related endometrial non-receptivity from multiple angles. Overall, our intention was mainly to address two overarching hypotheses: a) which are the best tools a physician may use to predict and optimize endometrial receptivity during a fresh embryo transfer? and b) what are the clinical implications of a pragmatic approach (i.e. the freeze-all strategy) towards hindered endometrial receptivity during a fresh embryo transfer?

## Curriculum Vitae

Samuel dos Santos Ribeiro was born on May 30<sup>th</sup> 1983, in Benoni (Johannesburg). In 1993, he moved to Portugal where he performed most of his education until ultimately obtaining his Medical Degree in 2007 from Nova Medical School (Lisbon). Between 2008 and 2015, he followed a Specialty Training Programme in Obstetrics and Gynaecology at Hospital Santa Maria (Lisbon). In 2013, he initiated both a two-year Clinical Scholars Research Training organized by Harvard Medical School (Boston) and his Subspecialty Training in Reproductive Medicine at the Centre for Reproductive Medicine of Universitair Ziekenhuis Brussel (Brussels). He is currently a consultant of Reproductive Medicine and Genetics at Universitair Ziekenhuis Brussel.

The primary focus of his ongoing research is understanding better the relationship between infertility and its treatment on endometrial receptivity. Specifically, one of his major fields of interest is unravelling the potential effect of circulating progesterone during ovarian stimulation on the chances of pregnancy following assisted reproduction. He is also a lead investigator of two clinical trials and one prospective study assessing the potential benefit of the following interventions on the clinical outcomes after in-vitro fertilization: endometrial scratching with same-cycle endometrial expression analysis, female urogenital microbiome assessment and the "freeze-all" embryos strategy. He has co-authored 19 publications in peer-reviewed scientific journals (7 of which as first author) and performed 48 scientific presentations in international conferences.